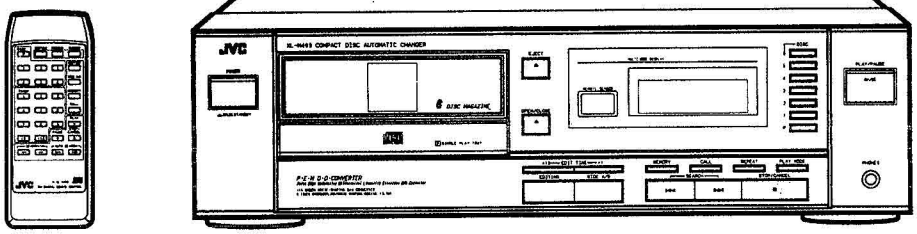
JVC

MODEL NO. XL-M403BK



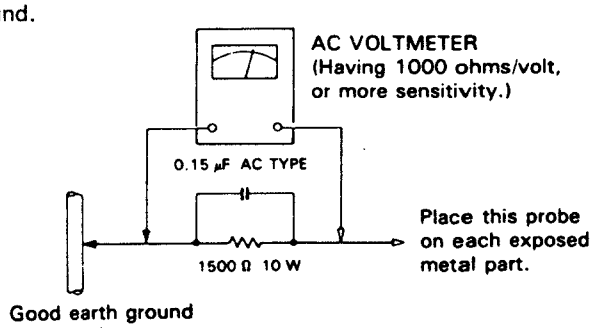
(XL-M403BK)

COMPACT disc DIGITAL AUDIO

No. 20161
Mar. 1990

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15 μF AC TYPE
1500 Ω 10 W
Place this probe on each exposed metal part.
Good earth ground

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: There are no serviceable parts inside the Laser Unit.
4. CAUTION: Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
5. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
6. CAUTION: If safety switches malfunction, the laser is able to function.
7. CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

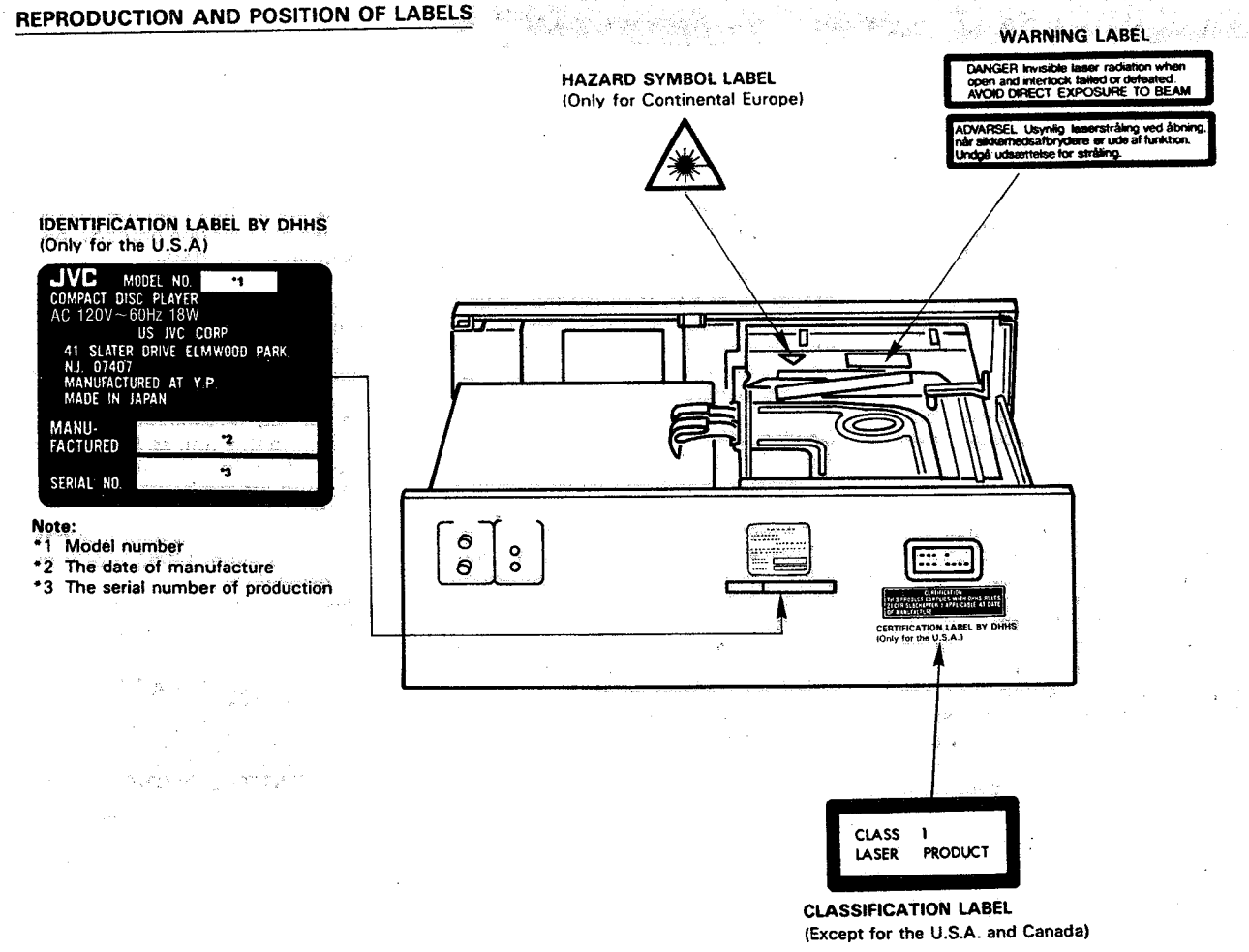
VARNING: OSYNLIG LASERSTRÅLNING UPPSTÅR VID KOMPONENTENS ÖPPNING NÄR SÄKERHETSBRYTAREN ÄR FRÅNSLAGEN.

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING.

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅPNING NÅR SIKKERHETSBRYTEREN ER AVSLOTT.
UNNGÅ UTSETTELSE FOR STRÅLING.

VAROITUS: LAITE SISÄLTÄÄ LASERDIODIN, JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ.

REPRODUCTION AND POSITION OF LABELS


WARNING LABEL
DANGER Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM
ADVARSEL Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.
HAZARD SYMBOL LABEL
(Only for Continental Europe)
IDENTIFICATION LABEL BY DHHS
(Only for the U.S.A)
JVC MODEL NO. *1
COMPACT DISC PLAYER
AC 120V~60Hz 18W
US JVC CORP
41 SLATER DRIVE ELMWOOD PARK, N.J. 07407
MANUFACTURED AT Y.P.
MADE IN JAPAN
MANU-FACTURED *2
SERIAL NO. *3
CERTIFICATION LABEL BY DHHS
(Only for the U.S.A.)
CLASS 1 LASER PRODUCT
CLASSIFICATION LABEL
(Except for the U.S.A. and Canada)

Note:
*1 Model number
*2 The date of manufacture
*3 The serial number of production

We would like to thank you for purchasing one of our JVC products.

Before connecting this unit to the wall outlet please read the instructions carefully to ensure that you obtain the best possible performance.

If you have any questions, please consult your JVC dealer.

COMPU LINK
Remote
Control System

The COMPU LINK Remote Control System is a system of convenience, it utilises the COMPU LINK-1/SYNCHRO terminals, located on the rear panel.
For further details please refer to page 3.

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PRECAUTIONS IN USE

Installation
— Select a location which is level, dry and neither too cold nor too hot (temperature range 5°C (41°F) and 35°C (95° F).
— Avoid dusty locations or any location subject to vibration.

Power points
— When unplugging from the wall socket, always pull the plug body, never the power cable.

Preventing malfunctions
— Never insert any metallic object into any part of the CD player-changer.
— Only use compact-discs bearing the mark shown below in Fig. 1.
— Placing anything other than a compact disc on the platter may cause the player to malfunction.
— If something goes wrong, turn the power off immediately. If the same problem reoccurs when the power is turned on once more, turn the power off again and consult your JVC dealer.

Volume settings
A CD player has almost zero background noise.
The technique of listening to the background level and then setting volume before the music starts, as used in analog turn-tables or tape decks, cannot be used. If you raise volume levels too high speaker damage may result.

Condensation
Since the CD player uses optical components, if either you move it from a cold location to a warm one, or you use it in a room subject to excessive humidity, equally if it is used in a room where a fire has just been lit, condensation could form on these optical components.
This may prevent the laser beam from being properly received and thus cause noise, even a malfunction.
If condensation has formed and the CD machine does not function correctly, we recommend that you leave it turned on for some hours.

If at the end of this time the CD player still does not function properly, please consult your JVC dealer.

Notes:
- When this equipment is placed near either a tuner or a radio receiver tuned to AM frequencies, interference may occur. If this has happened, we recommend either that you move this unit as far away from the tuner or receiver as possible, or you turn off the power to this unit, briefly.
- When carrying this unit, it is best if you avoid either tilting it or turning it upside-down.
  Where you cannot avoid doing so, please remove the magazine first.

COMPACT disc DIGITAL AUDIO

Fig. 1

BEFORE USING FOR THE FIRST TIME

How to insert the CDs

1. When the CD magazine provided is already loaded in machine, press the [EJECT (▲)] button and slide the magazine out.

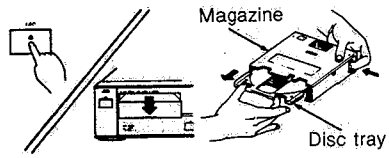

Fig. 2

2. The disk trays in the magazine are removable.
   Depress the tray-lock button and slide the disk tray "part-way" out.
3. Withdraw the disk tray carefully with both hands and locate a disc, label side up, while holding the disc tray with the other hand.

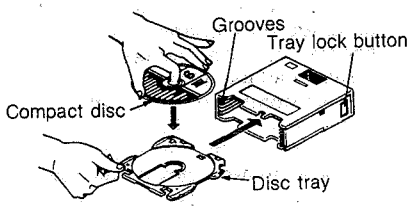

Fig. 3

4. Line up the disc tray with the grooves in the magazine and push the disc tray right in.
   Never bend the disc tray, or force it into the magazine. It is unnecessary to press the tray-lock button when inserting the disc tray.

Please notes:

- *A disc tray inserted skewed may cause a malfunction.*

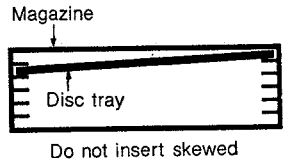

Fig. 4

- *The openings in the disc trays are for the passage of the laser signal. These openings leave a part of the shiny surface of the disc exposed. Please take care not to touch this shiny surface.*
- *It is not possible to play from the disc if it is located upside-down.*
- *Never place a single disc directly in the magazine Always keep the magazine loaded with all six disc trays.*
- *When removing or inserting disc trays always hold the magazine horizontally.*

How to place CDs

Connect the power cord into AC outlet.
Turn "ON" the power switch.

In case of the SINGLE PLAY TRAY

1. Press the [OPEN/CLOSE (▲)] button, and slide the disc tray out.

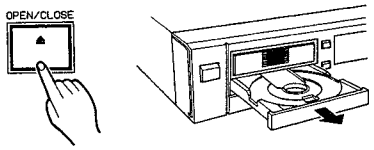

Fig. 5

2. Place a disc on the disc tray with its label side up.
3. Press the [OPEN/CLOSE (▲)] button again to slide the disc tray in.

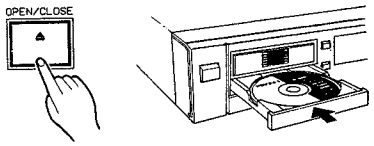

Fig. 6

Note:

- When the disc is placed on the tray, be careful not to let the disc stick out from the tray.

How to install batteries (Fig. 7 - Fig. 9)

1. Remove the rear cover of the remote control unit by pressing down on it with your thumb and simultaneously pulling it backwards, as shown in Fig. 7.

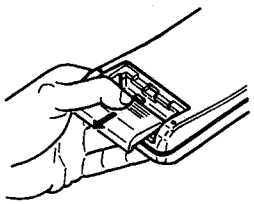

Fig. 7

2. Install batteries (AAA, R03, UM-4) as shown in Fig. 8.
   Be sure batteries are installed with correct polarity, (+) and (−).

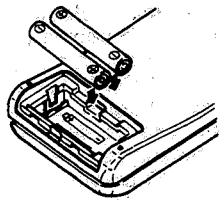

Fig. 8

3. Reinstall the rear cover of the remote control unit. Slide the rear cover back as shown in Fig. 9.

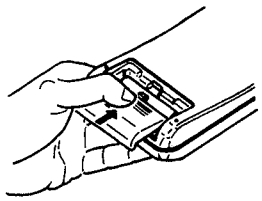

Fig. 9

Batteries

Incorrect use of batteries can cause corrosion or damage. Note the following points to lengthen battery life.

1. Install batteries observing the correct polarity, (+) and (−).
2. Do not use new and old batteries simultaneously.
3. Batteries with similar shapes may have different voltage ratings. Be sure to use the correct batteries.
4. Remove batteries from the remote control unit if it will not be used for a long period of time.

Notes:

- The lower the temperature, the shorter the battery life.
- Battery replacement.

The service life of the batteries depends on the condition of use; the standard life is about one year.
When the batteries become weak, the effective distance of the remote control unit will become shorter. If this happens, replace the batteries with new ones.

COMPU-LINK CONTROL SYSTEM

This is a system of convenience, both originated and developed by JVC. The following is a brief explanation of its more important features:

Automatic Source Selection
When the remote cables provided are utilised to connect this unit to others which have SYNCHRO terminals incorporated, switching-in of each system component can be done via a single touch on the source selector button located on a JVC amplifier or receiver.
When selection is carried out in this manner, the corresponding unit will automatically start operation.
On pressing the play button, the source selector for either an amplifier or a receiver will be automatically changed.
When the new unit has been switched-in, the previously selected component will stop within five seconds.

Synchronized Recording
Synchronized recording refers to the process in which the cassette deck starts recording, synchronised with the CD player-changer.
Synchronized recording is carried out as follows:

1. Set the cassette deck to the REC/PAUSE mode, in accordance with its instructions.
2. When you want programmed recording, program the music to be selected in any order, as required.
3. Press the CD player-changer [PLAY (▶)] button. The cassette deck is now set in record mode and automatically synchronised with the CD player-changer for recording. Synchronised recording can now take place.

Notes:

- Synchronised recording automatically halts when the CD player-changer stops playing.
- To deselect synchronised recording, press the [STOP (■)] button located on the CD player-changer or the cassette deck.
- Press the cassette deck [REC (○)] and [PLAY (▶)] buttons when starting in the middle of a selection.
- When the REC/PAUSE mode has been set by pressing the [PAUSE (⏸)] button after pressing the [REC (○)] and [PLAY (▶)] buttons have been pressed simultaneously, synchronised recording is no longer possible. For details, please refer to the cassette deck instructions.
- Abnormal operation will result if the units power supply is interrupted while in operation. When this occurs, pressing the activation button once more will restart the unit.
- Please ensure that the SYNCHRO terminals located on this and other units are only connected using the special remote cables provided. Please read the instructions for each system component carefully.
- The source unit is locked to the CD setting during synchronised recording, so as to avoid any accidental halt to recording or switching over to another component. When you wish to switch another unit in, it is necessary to first deselect the synchronised recording mode.
- Synchronized recording is only possible when using JVC products incorporating SYNCHRO connectors. For further details, consult your JVC dealer.
- Only JVC cassette decks incorporating the synchronised recording feature can be used with this equipment in synchronised recording mode. Contact your JVC dealer for details.

CONNECTION DIAGRAM

— Do not connect to the wall socket until all unit connections are made —

This diagram is given as an example.

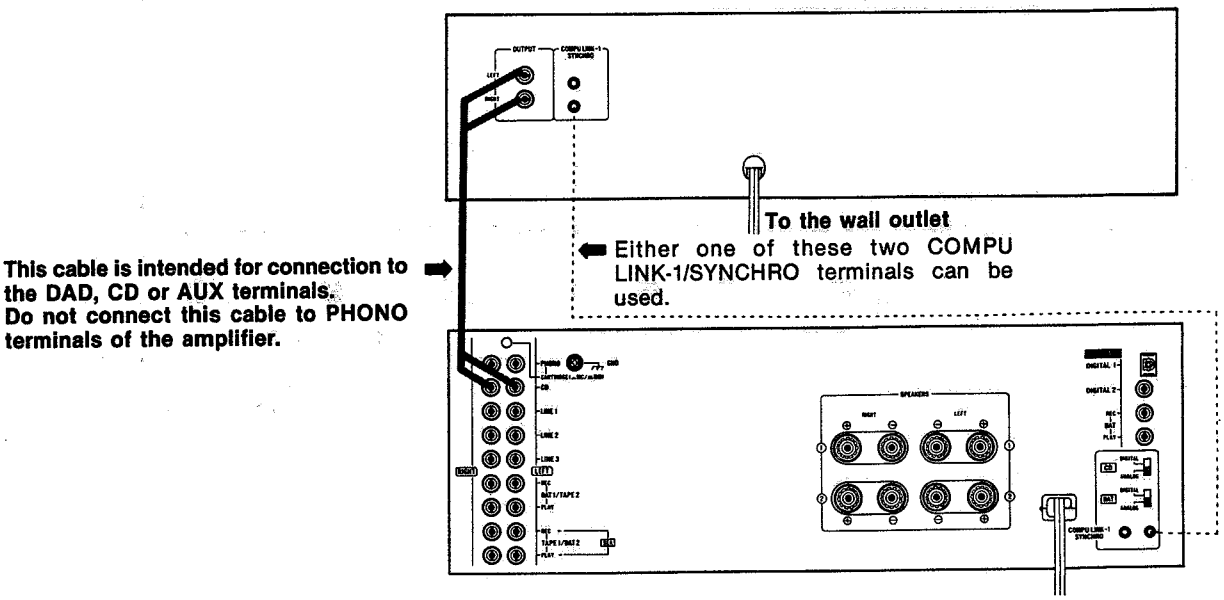
To the wall outlet
Either one of these two COMPU LINK-1/SYNCHRO terminals can be used.
This cable is intended for connection to the DAD, CD or AUX terminals.
Do not connect this cable to PHONO terminals of the amplifier.

Fig. 10

DESCRIPTION AND FUNCTIONS

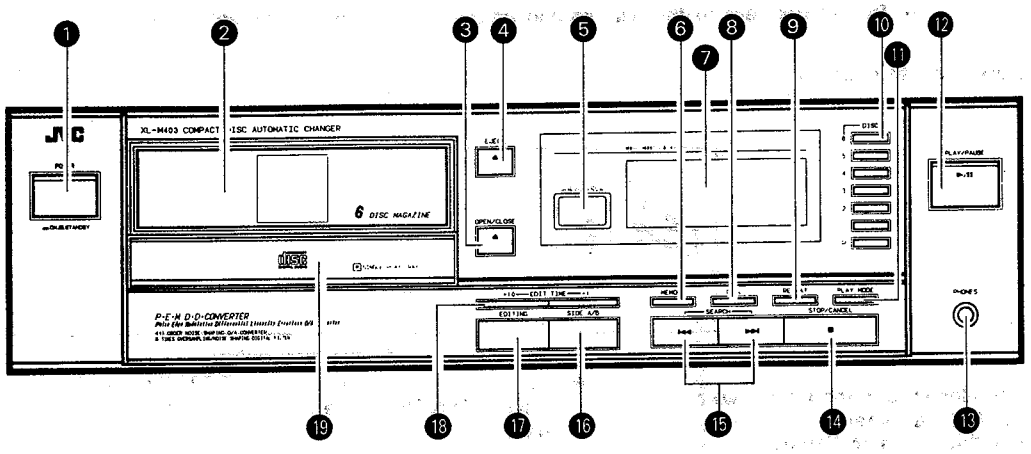

Fig. 11

❶ POWER (⎓ ON/ ⏾ STANDBY)
Press this button to turn the power ON. Press again to turn the power off and activate the standby mode.
A small amount of power (2 watts) is consumed in the standby mode. To turn the power off completely, disconnect the power cord from the wall outlet.

❷ Magazine slot
Insert a six disc capacity magazine. Push the magazine in 'till it clicks into place.

❸ OPEN/CLOSE (⏏)
Press this button for loading a disc into or taking a disc out of the SINGLE PLAY TRAY. If this button is depressed during the play of the single disc, the play will stop and the disc will move out of the tray. However, pushing this button does not affect the play of a disc in the 6 disc magazine.

Note:
- Do not hold the tray with your hand during open/close movement.

❹ EJECT (⏏)
Push this button to eject the magazine. If this button is pushed during play, play will automatically stop and the magazine will eject.

Note:
- This control does not function when the power is off.
  Damage could be caused if you put too much weight on the magazine as the EJECT button ejects it.
  Take care to avoid doing this.

❺ REMOTE SENSOR

❻ MEMORY
When in PROGRAM mode, press this button to programme the selections you require, while the selected discs and tracks numbers, in the MULTI-MODE DISPLAY are flashing on and off.

❼ MULTI-MODE DISPLAY
This shows both the programmed selections data and disc status information. For further details please refer to the "MULTI-MODE DISPLAY" section on page 7.

❽ CALL
This button is used to check the programmed selections data. When pressed, this button displays the disc, track and step numbers, programmed earlier, in the MULTI-MODE DISPLAY, starting with the first selection programmed.

❾ REPEAT
This button is pressed when you wish to repeat the selections in either CONTINUE or in PROGRAM mode. When this button is pressed, the REPEAT indicator lights up. The repeat function has a change cycle that follows the sequence:
"Complete disc repeat" (all the selections on all 7 discs, or all the programmed selections on that disc)
"single tune repeat"
"release"

❿ DISC
P : Push this button to play or program a disc on the SINGLE PLAY TRAY.
1~6 : Push these buttons to play or program discs in the magazine.

⓫ PLAY MODE
Press this button to select the play mode when stopped.
Press this button repeatedly to change the play mode functions, i.e. PROGRAM RANDOM & CONTINUE, in that sequence. These functions are displayed in the "play mode" indicators.

⓬ PLAY (▶)/PAUSE (⏸)
Press this button to start playing either from the first selection or the programmed selection. Press this button once more to pause. To restart, press this button once again.

⓭ PHONES
Plug the headphones into this jack for private listening.

⓮ STOP/CANCEL (■)
Press this button once to stop playing.
Pressing this button during a break in the PROGRAM MODE cancels the program displayed.

⓯ SEARCH (⏮) (Backwards)
Press once (for approx. 1/2 second) during play to return the sensor to the start of the current selection. Press twice to return the sensor to the start of the previous selection. Each time this button is pressed, the sensor is moved backwards by one selection. Continue pressing this button to retrace your selections
SEARCH (⏭) (Forwards)
Press once (for approx. 1/2 second) during play to move the sensor to the start of the next selection.
Each time this button is pressed, the sensor moves forward one step. (When this button is pressed at the end of the last track the sensor moves to the first selection on the next CD disc.)
Continue pressing this button to progress through the programme.

⓰ SIDE (A/B)
Use this button to select the tape side when programming for edit recording.

⓱ EDITING
This button is used when you are edit recording.
Whenever this button is pressed "A. Edit" and "P.Edit" appear in turn.

⓲ EDIT TIME (+10, +1)
These buttons are used to set the tape recording time allowed for edit recording.

⓳ SINGLE PLAY TRAY
Use this tray for playing a single disc.

MULTI-MODE DISPLAY

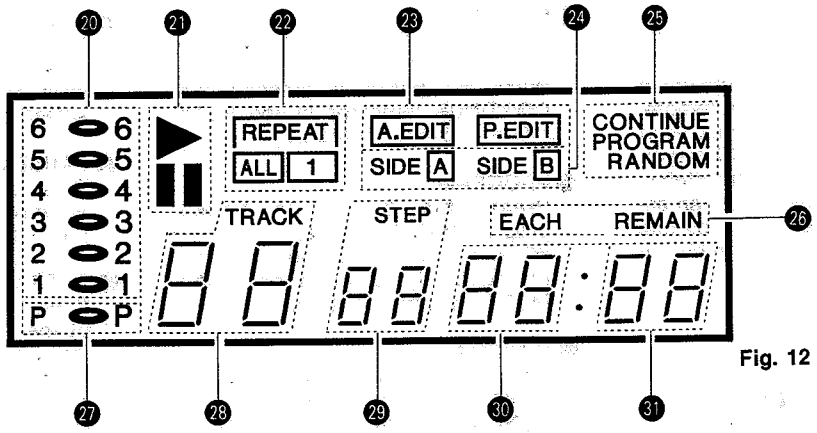

Fig. 12

20 Pictorial indication of the disc status
The discs in the magazine, the disc being played currently, or the movements of the individual disc within the magazine are pictorially displayed.

21 PLAY/PAUSE indicators
▶ : Lights during play
II : Lights in the pause mode

22 REPEAT
Lights when the repeat selection is ready
[ALL] : Lights up when "repeat play" of all selections is made.
[1] : Lights up when "repeat play" of one only selection is made.

23 EDITING indicators
Lights up during editing recording.
[A. EDIT]: Lights up during Auto Edit Recording.
[P. EDIT]: Lights up during Program Edit Recording.

24 TAPE SIDE indicators
SIDE [A] : Lights up when the A side of a tape is selected.
SIDE [B] : Lights up when the B side of a tape is selected.

25 PLAY MODE indicators
CONTINUE : Lights up in continuous play mode
PROGRAM : Lights up in programmed play mode
RANDOM : Lights up in random play mode

26 EACH/REMAIN
EACH : Shows the elapsed time for each selection.
REMAIN : Shows the remaining time for each selection.

27 Pictorial indication of the disc status
Shows the disc status on the single tray.

28 TRACK
Lights up when all the selections on the disc are shown
Shows either the programmed selection numbers, or the current selection number of the disc, during programmed play.

29 STEP
STEP : Shows the numbers of the memory steps corresponding with the programmed selections.
When the indicator "STEP" does not light, it shows the index number.

30 Time indicator (MINUTE)
Shows:
the total playing time, elapsed playing time, or remaining playing time, in minutes.
(Shows nothing when the total number of selections is greater than 32).

31 Time indicator (SECONDS)
Shows :
the total playing time, elapsed playing time, or remaining playing time, in seconds.

REMOTE CONTROL UNIT

HOW TO OPERATE
Point the remote control unit towards the remote sensor on the front panel of the CD player-changer, always operating it steadily and carefully. If the remote-control unit is within about 7 metres of the CD player-changer, the CD player-changer can be operated comfortably. Do not point the remote unit at an angle to the remote sensor because this will reduce the distance from which you can control the unit.

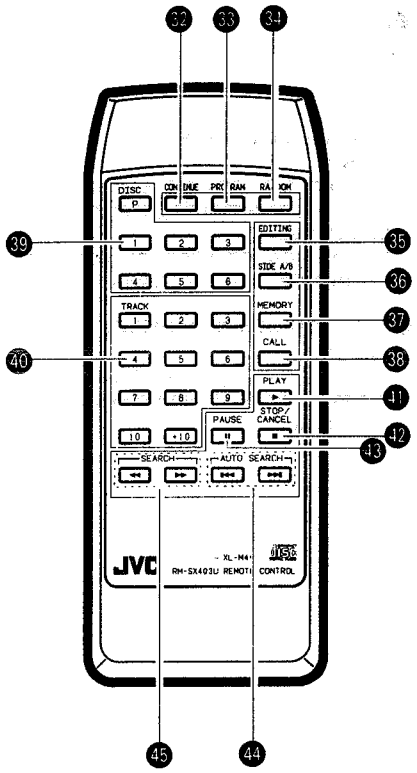

Fig. 13

32 CONTINUE
Press this button to select continuous play mode.
When this button is pressed, the CONTINUE indicator in the PLAY MODE indicator lights up.

33 PROGRAM
Press this button to select programmed play mode.
When this button is pressed, the PROGRAM indicator in the PLAY MODE indicator lights up.

34 RANDOM
Press this button for random play.
When this button is pressed, the RANDOM indicator in the MULTI-MODE DISPLAY lights up.

35 EDITING
Press this button to select edit recording mode.
Each time this button is pressed, the [A EDIT] or [P EDIT] indications appear, in sequence.

36 SIDE A/B
Press this button to select the tape side, when programming for edit recording.

37 MEMORY
Press this button to program selections.
See page 13 for further details.

38 CALL
This button is used to check programmed data.
While this button is pressed, the previously programmed disc, track and step numbers are indicated in the display, as from the first step.

39 DISC
Use these buttons to assign the disc numbers (P, 1 to 6).

40 TRACK
This button is used to assign track numbers (range: 1-99) for a disc either to be played or programmed.
Whenever track numbers greater than 10 are to be assigned, use a combination of the [+10] button and [1] - [10] key numbered buttons.

[For Example]
17 : Press the [+10] button and [1] - [10] key operation number 7.
30 : Press the [+10] button twice and [1] - [10] key operation number 10.

41 PLAY (▶)
Press this button to begin play.

42 STOP/CANCEL (■)
Press this button to stop play.
This button is pressed when you wish to cancel the programmed selection displayed (see page 14).

43 PAUSE (⏸)
Press this button to stop play temporarily. To restart, press the [PLAY (▶)] button

44 AUTO SEARCH (⏮, ⏭)
Press this button to locate the start of the current selection, or else to return to the previous selection during play.
The track selected will retrace by one selection each time the button is pressed. If the button is held down, the track selected will retrace by one selection continuously until the button is released.
Press this button, during play, to locate the next selection. Holding it down moves the pickup forward one selection.

Please Note :
- *During programmed play mode, pressing the [AUTO SEARCH (⏮, ⏭)] buttons selects, respectively, the previous or next programmed step.*

45 SEARCH (◀◀, ▶▶)
Press this button, during play, to scan backwards. When this button is held down, the CD player-changer performs a backward search. Press this button, during play, to scan forwards. When this button is held down, the CD player-changer performs a forward search.